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AUTHOR Jones, Linda K.; Falkenberg, Eugene
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ABSTRACT

This paper presents findings of a study that examined the effect of community education on citizens' attitudes over the school years 1985-86 through 1987-88. Bronfenbrenner's ecological framework (1979) for describing the interdependency of community relationships was used to assess the impact of the community-education process on citizens' and students' attitudes. Data were collected through a survey of residents, school personnel, service-agency personnel, and students at two schools in Lethbridge School District, Alberta (Canada); interviews with community residents; and observation of community forums. One school was a community school, designed and staffed to follow the Alberta (Canada) Community School guidelines; and the other was a mandated fine-arts elementary school. A significant difference in citizen participation was found to exist among the four ecological system levels (micro, meso, exo, and macro). Community education appeared to affect citizens' attitudes differently, depending on the ecological distance of the relationships between citizens and the school process. The ecological model was successful in differentiating citizens' and students' attitudes toward their relationships with the school process. The model generated moderately significant results when used to determine differences between the community schools and the control school. A tentative conclusion is that the ecological model was effective in describing the neighborhood school environments and in assessing how and to what extent the school process interacts with students; it was moderately effective in assessing the effect of school process on citizens. Two figures and six tables are included. (LMI)

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THE ECOLOGY OF A COMMUNITY SCHOOL①

Linda K. Jones
Faculty of Education
University of Lethbridge

Eugene Falkenberg
Faculty of Education
University of Lethbridge

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THE ECOLOGY OF A COMMUNITY SCHOOL[1]

Linda K. Jones, Ph.D.
University of Lethbridge
Lethbridge, Alberta

Eugene Falkenberg, Ph.D.
University of Lethbridge
Lethbridge, Alberta

Abstract: Research to demonstrate Community Education has been successful in reaching its goals has been sparse. One difficulty is the lack of a research model for describing community relations. Bronfenbrenner suggests an ecological framework for describing the interdependency of community relationships that Community Educators can use to assess the impact of the Community Education process, via a Community School, on citizens' attitudes and students' behaviors.

Summary: The ecological research model was proven to be significant in differentiating citizens' and students attitudes about their relationships with the school process. It was moderately significant when determining differences between a Community School and the control school.

INTRODUCTION

Community educators have devoted considerable effort to conceptualizing the philosophical framework of Community Education and appropriate strategies to implement the tenets of that framework. However, because the application of the concept is relatively new and proponents have been primarily action-oriented (VanVoorhees, 1972) actual assessment of Community Education goals has been very limited. The concept has tended to be promoted and accepted on its "humanistic goodness" and not necessarily on sound research procedures.

In an attempt to stimulate research by professionals in the field of Community Education, Gansneder et al (1980) identified specific research needs. A top priority identified by this group was to study the impact of the Community School on citizens' attitudes since there is a strong need to verify that the Community Education process, via the Community School, is making a difference in their lives.

THEORETICAL BACKGROUND

Community Educators have begun to define the systematic inquiry of empirical information about communities as community-based research (Burbach and Decker, 1977). It is suggested that community-based research contains the traditional elements of applied and action-oriented research plus contextual referents. Within the contextual boundaries empirical data can have immediate application to community situations that require change based on policy decision-making processes. Community-based research can be "...the systematic study of the community for the purpose of solving its problems and improving its products or processes (p. 109)."

Bronfenbrenner (1979) suggests that the outcomes of programs and processes are systems-oriented and dependent upon a complex interaction of

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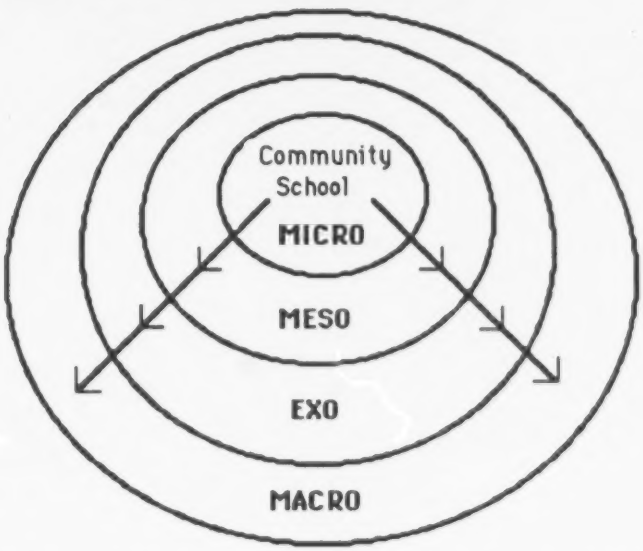
levels or units within the total system. A negative or positive development - i.e. change - in one of the units has an effect upon other units. There is an interdependency that needs to be accounted for in community-based research.

Adapting Bronfenbrenner's (1979) model to Community Education, it (1) identifies the relations between the Community School programs and processes and the ecological environment in which they occur, and (2) defines the relations and interconnections that exist between these variables. Bronfenbrenner defines this research model as an ecological experiment which is the "...systematic contrast between two or more environmental systems...with a careful attempt to control for possible confounding influences...(p. 5)." The environment is conceptualized spatially as a set of circles nested within each other. Each successive circle contains the previous one.

Diagram 1
Graphic Interpretation of Research Model



Brim (1975) identified terminology for the circles Bronfenbrenner (1979) described. The first is called the micro system, and it is the immediate environmental setting containing the Community School and it includes such variables as place, periods of time, activities and roles. The second circle is called the meso system and defines the environmental setting that contains the interrelations among the major systems that interact with the Community School, such as family and peer-group interaction patterns. The third circle is the exo system; it is an extension of the meso system and consists of formal and informal concrete social structures that impinge upon or encompass the other settings - informal social networks, service-oriented agencies and organizations. The fourth circle, called the macro system, is the environmental setting for the global institutions of the culture, or sub-culture, of which the micro, meso, and exo systems are the concrete manifestations, such as the political, educational, economical, social and legal systems.

PURPOSE

The purpose of the study was to verify the proposition that Community Education, via a Community School, affects citizens' attitudes differently,

depending upon the environmental "distance" of the relationships between citizens and the school process.

METHODOLOGY

Research Design. Bronfenbrenner's (1979) ecological research model, plus Brim's (1975) ecological terminology, was used as the framework for assessing the impact of a Community School on citizens' attitudes. The points of investigation were:

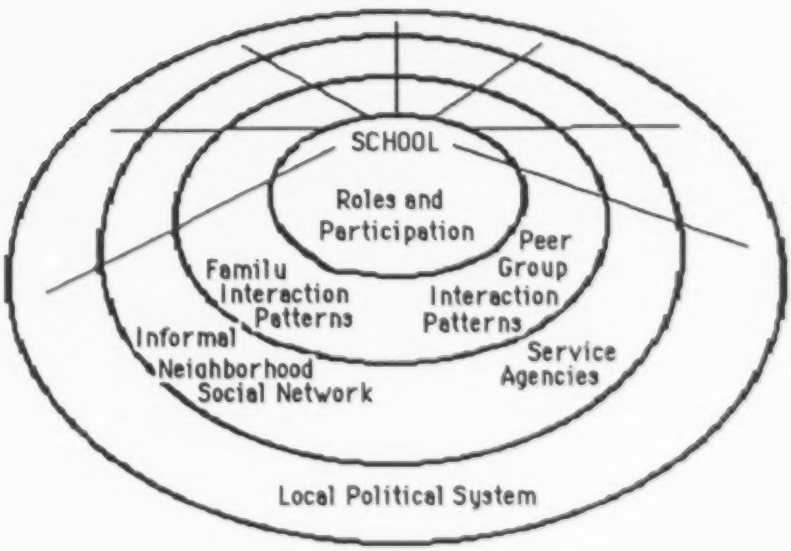
* the micro system, defined as the immediate setting of a school; citizens' attitudes were assessed on the relationship between their school participation and roles and the school process;

* the meso system, defined as the interrelations between the major neighborhood systems and the school; citizens' attitudes were assessed on the relationship between their family and peer-group interaction patterns and the school process;

* the exo system, defined as an extension of the meso system and containing broader formal and informal neighborhood systems; citizens' attitudes were assessed on their relationships with service agencies involved with the school process and the informal neighborhood social network and the school process.

* the macro system, defined as encompassing the interrelationships of global institutions of the culture; citizens' attitudes were assessed on their relationship with the local political system and the school process.

Diagram 2
Graphic Interpretation of Hypotheses



The Setting. In 1982 two new schools were opened in the Lethbridge School District #51 - Nicholas Sheran Community School and Park Meadows Elementary School. Both have very similar designs and are situated in neighborhoods of similar social and economic position. Nicholas Sheran Community School was designed and staffed to follow the Alberta Community School guidelines and thus encourages community involvement in the Community Education process. The staff includes administrators, support people, teachers, a Community School Coordinator and a part-time Community-Based Curriculum specialist. In addition, a Community School Local Advisory Council functions as part of the Community Education process. Park Meadows Elementary School is mandated to be a fine-arts elementary school and encourages parent involvement through the curriculum program. In 1986 a Parent Advisory Council was initiated in order to extend parent involvement.

Research Advisory Committee. During the research project the principal investigators have consulted and been advised by the principal of Nicholas Sheran Community School and Park Meadows Elementary School; two Nicholas Sheran Community School Coordinators and a Park Meadows Education Intern. They comprised the Research Advisory Committee which met to discuss various implementation strategies of the research project.

Research Sample. The adult population for the research project included a random sample of citizens residing in the Nicholas Sheran Community School and Park Meadows Elementary School boundaries. Also included were all administrators, support staff and teachers employed at the schools; and selected personnel of community agencies and/or organizations that coordinate services in the neighborhoods through each school. The student population included all the second, fourth and sixth grade students at each school.

A computerized random sample was administered on the residents' addresses in each school boundary in order to select 30% of the total population for study. The total populations of school and service agency personnel were surveyed. In addition the total populations of second, fourth and sixth grade students of each school were surveyed.

Table 1
Research Samples

Populations	Nicholas Sheran			Park Meadows		
	85/86	86/87	87/88	85/86	86/87	87/88
Citizens						
Residents	353	373	400	458	351	400
SchoolPersonnel	45	45	45	45	45	45
Agency Personnel	25	0	30	37	0	30
Students	233	234	235	240	245	239

Instrumentation and Administration Procedures. A questionnaire for residents, which required responses to questions identified as representing the micro, meso, exo or macro environmental setting, was delivered to the randomly selected addresses in each school boundary in November, 1985, October, 1986 and October, 1987. It was first attached to a letter of explanation; then delivered and picked by sixth and/or fifth grade students from each school.

Students were introduced to the study and coached on the delivery and pick-up procedure by the principal investigators and their teachers. In

addition they were supplied with an introduction card they took with them to each residence. The classroom teachers supervised the delivery and pick-up routine. The return rate was moderate.

Table 2
Questionnaire Return Rate

	1985/86	1986/87	1987-88
Park Meadows	62%	68%	54%
Nicholas Sheran	24%	49%	40%

The school personnel questionnaire was delivered directly to each school and administered by the principal. The questionnaire for service agency personnel was delivered directly to one identified service agency person by the Nicholas Sheran Community School Coordinator or Park Meadows Education Intern. The return rate was 100% for both questionnaires for each schools.

The student questionnaire was delivered directly to each school and administered by each classroom teacher with the help of an instruction sheet. Parents were notified of the impending study and in some cases asked to sign a parental consent form. The return rate was 100% for both schools.

Item reliability was extremely high for all questionnaires.

Table 3
Questionnaire Item Reliability

	1985/86	1986/87	1987/88	Combined
Citizens	.98	.98	.98	.98
Student	.83	.83	.81	.82

1985-88 COMBINED RESEARCH FINDINGS[2]

Citizens Demographics

Following is a statistical analysis of the surveyed adult populations of Nicholas Sheran Community School (NS) and Park Meadows Elementary School (PS). A chi-square analysis of the actual frequencies with the expected frequencies indicated no significant differences between Nicholas Sheran and Park Meadows questionnaire respondents for all categories.

[2]Statistical analysis and conclusions, using the above research model, of the impact of a Community School on citizens' attitudes and students' behaviors will be reported in the next issue of the *Community Education Research Digest*.

Table 4
1985-88 Citizens' Demographic Data

	Park Meadows n=192	Nichols Sheran n=126		Park Meadows n=192	Nichols Sheran n=126
GENDER	%	%	INCOME	%	%
Female	61.50	69.80	up to 19,000	15.60	11.20
Male	34.40	27.00	20,000-29,999	16.70	11.20
AGE			30,000-49,999	27.60	29.40
17-29	14.10	16.70	50,000+	18.20	21.40
30-39	34.40	27.00	No response	21.90	17.40
40-49	24.00	23.00	MARITAL STATUS		
50-59	7.80	8.70	Married	81.40	77.00
60+	2.60	6.30	Single	14.00	19.10
No response	3.10	3.20	No response	4.60	3.90
EDUCATION			SCHOOL RESIDENT		
Elementary	3.60	2.40	Yes	71.90	74.60
High School	31.80	23.80	No	19.30	20.60
Trade	16.70	15.90	No response	8.80	4.80
University	37.50	42.90			
	6.30	12.70			
Postgraduate					
No response	4.10	2.30			

Most of the people who responded to the survey were female. Young adults answered and returned the survey more often than other age groups, although a wide age range was represented. Most of the people who answered the survey had completed a high school, a technical, trade or business school, or a university or college degree. Although the income section had the largest no response percentage of any of the demographic categories the data still reflected that most of the respondents belonged to a high middle-income group. An overwhelming majority of the people surveyed were married. As expected the majority of respondents lived within the local school boundaries.

Students' Demographics. Demographic information was not gathered for students and it was assumed they would represent similar categories as the adults within the school boundaries..

Ecological Research Model. A multivariate, repeated measures analysis of variance of the ecological research model by the adult respondents indicated a significant difference between the four systems (micro, meso, exo and macro) every year; but no significant difference between the schools and the ecological model for two of the three years.

Table 5
Citizens Ecological Research Model

	1985/86		1986/87		1987/88		Combined	
	F	Prob	F	Prob	F	Prob	F	Prob
Ecological model	197.44	.000	136.35	.000	129.60	.000	457.40	.000
Ecological model and schools	.30	.83	.54	.65	2.49	.06	1.53	.205

A multivariate, repeated measures analysis of variance of the ecological research model by student respondents indicated a significant difference between the four systems (micro, meso, exo and macro) and the schools and the ecological model for every year.

Table 6
Students Ecological Research Model

	1985/86		1986/87		1987/88		Combined	
	F	Prob	F	Prob	F	Prob	F	Prob
Ecological model	1332.1	.000	928.0	.000	1656.1	.000	176.3	.000
Ecological model and schools	2.3	.08	2.5	.06	3.5	.02	2.4	.067

CONCLUSIONS

Citizens' Profile. All the demographic data for the years 1985-1988 indicate the Nicholas Sheran and Park Meadows survey samples (residents, school personnel and service agency personnel) were similar on the variables gender, age, education, income, marital status and school boundary resident. From this information it can be assumed that very similar populations were surveyed and that any significant variance in the research variables is the result of differences other than gender, age, education, income, marital status and school boundary residency.

Ecological Model. A most exciting outcome of this research is the consistent and highly significant difference between the ecological systems, micro, meso, exo and macro. This finding holds true for both adult and student data for each year and the combined years. Community Education, via a Community School, affects citizens' attitudes differently, depending on the ecological "distance" of the relationships between citizens and the school process.

This can be important for Community Educators when developing program and public support. Is it **more** important to spend time developing relationships micro and meso systems? Does Community School programming include enough development of relationships in the exo and macro systems? Should community development have a linear approach, i.e. first micro relationships then macro, exo and finally macro. Or, should community development have a more holistic approach that recognizes the immediate and continual interdependency of a variety of citizens' relationships with the Community School process?

Ecological Model and Schools. The effectiveness of this ecological model to determine differences between a Community School and a school not designated a Community School is still in question. The 1985-86 and 1986-87 citizens' findings indicate the model does not differentiate enough between the two types of schools. However, the 1987-88 citizens' findings demonstrate that it does. The combined data, 1985-88, shows a tendency of the model to contrast discrepancies between the impact of a Community School and a non-Community School on citizens' attitudes.

Note, however, there is an increasing probability of differentiation between the schools with each year. If the Community Education process is slow (and linear) to impact citizens' attitudes about their relationships with the Community School process then a three year study in not long enough for assessment.

The picture is much clearer when considering the ecological model as a mode for determining dissimilarities between students in a Community School and a school not designated a Community School. All three years a statistically significant difference was demonstrated when analyzing the interaction of the model and students' responses by school.

Research Model. Much further study is needed of this ecological research model, and variations, to determine it's final appropriateness as a mode for defining and describing Community Education environments. From this research project it is clear that the micro, meso, exo and macro settings are divergent and consistently reflect important differences between students' responses by schools. What is not clear is the confounding of the model and citizens' responses. Continued research is need to clarify this issue.

Tentatively, it may be assumed that the proposed research model is an effective way of describing the neighborhood school environments and of assessing how and the degree to which the school process interacts with students and moderately effective of doing the same with citizens.

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